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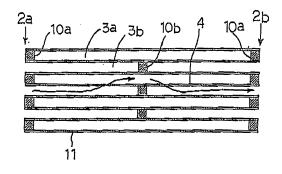
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(54) Honeycomb structure and honeycomb catalytic body

(57) There are disclosed a honeycomb catalytic body to which a wall flow structure is applied so that a fluid such as an exhaust gas passes through a partition wall twice or more, and a honeycomb structure for use as a catalyst carrier of the honeycomb catalytic body in which a pore characteristic and the like are appropriately adjusted as the catalytic body. In a honeycomb structure 11 including porous partition walls 4 arranged so as to form a plurality of cells 3 which communicate between

two end surfaces of the honeycomb structure and having a large number of pores; and plugging portions 10 arranged so as to plug at least a part of the plurality of cells 3 at any position in a length direction of the cells, an average maximum image distance of the partition walls is larger than 40 μm , and the plugging portions 10 are arranged so that at least a part of a fluid which has entered the cells from one end surface passes through the partition wall 4 twice or more, and is then discharged from the other end portion.

FIG. 1



EP 1 839 748 A3



EUROPEAN SEARCH REPORT

Application Number EP 07 25 1367

	DOCUMENTS CONSID	+				
Category	Citation of document with it of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)		
P,X	MIYAIRI YUKIO [JP]; MIZUNO Y) 8 March 2 * claims 3,19; figu & US 2007/048494 A1 AL) 1 March 2007 (2	2007 (2007-03-08) ures 7-9 * L (MIYAIRI YUKIO [JP] ET 2007-03-01) 		INV. B01J35/04 B01D46/24 B01D53/94 B01J23/42 B01J23/46 B01J23/63		
X	EP 0 736 503 A1 (NI DENSO CORP [JP]) 9 October 1996 (199 * column 10, line 5 example 8 *	96-10-09)	1-20	B01J37/00 C04B38/00 B01J37/02 F01N3/02		
D,X	JP 2005 262210 A (F 29 September 2005 (* claim 1; figures	(2005-09-29)	1-20			
Α	US 4 428 758 A (MON 31 January 1984 (19 * figures 3-5 *	HTIERTH MAX R [US]) 084-01-31)	1-20	TECHNICAL FIFT DO		
A	EP 1 293 241 A (HITHINO MOTORS LTD [JF 19 March 2003 (2003 * figure 13 *		1-20	TECHNICAL FIELDS SEARCHED (IPC) B01J C04B F01N B01D		
Α	EP 1 408 208 A1 (NG 14 April 2004 (2004 * figures 1-5 *	GK INSULATORS LTD [JP]) I-04-14)	4	B28B		
	The present search report has	been drawn up for all claims Date of completion of the search	-	Examiner		
The Hague		19 September 200	19 September 2007 Mat			
C	ATEGORY OF CITED DOCUMENTS	T : theory or principle	!			
X : part Y : part docu	icularly relevant if taken alone icularly relevant if combined with anot ument of the same category inological background	E : earlier patent doo after the filing dat	cument, but public e n the application			

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 07 25 1367

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

19-09-2007

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 2007026803	Α	08-03-2007	US	2007048494	A1	01-03-2007
US 2007048494	A1	01-03-2007	WO	2007026803	A1	08-03-2007
EP 0736503	A1	09-10-1996	DE DE JP JP	69622307 69622307 3750178 8332329		22-08-2002 20-03-2003 01-03-2006 17-12-1996
JP 2005262210	Α	29-09-2005	NONE			
US 4428758	Α	31-01-1984	NONE			
EP 1293241	Α	19-03-2003	CN US	1417455 2003093982		14-05-2003 22-05-2003
EP 1408208	A1	14-04-2004	DE DE JP US	60301308 60301308 2004130229 2004068971	D1 T2 A A1	22-09-2005 01-06-2006 30-04-2004 15-04-2004

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